Equip + Supplies

DDS   6/20   s/RHW

C/ADPS

For information and any action you deem appropriate.

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h/w note by RHW: "1 to 2: For appropriate action.
Reply should be prepared for signature by Executive
Director and checked with Comptroller who has
Agency responsibility for all liaison with the Bureau
of the Budget.   2 0 JUN 1963
                    s/RHW"

STAT   [   ] Asst. to the Director
                                    6/19/63

A-EA-DD/S:RHW:maq (21 Jun 63)
Distribution:
    Orig - C/ADPS w/O & 1 cpy of DD/S 63-2624 w/att
      1 - DD/S Subject w/cpy of DD/S 63-2624 w/att
      1 - DD/S Chrono
DD/S 63-2624: Memo dtd 17 Jun 63 to Executive Officers of Depts. and Establishments fm
                Harold Seidman, subj: Rpt of ADP Research and Development Projects w/att

63- 4982

DD/S 63 2624

EXECUTIVE OFFICE OF THE PRESIDENT
BUREAU OF THE BUDGET
Washington 25, D. C.

June 17, 1963

MEMORANDUM FOR EXECUTIVE OFFICERS OF DEPARTMENTS AND ESTABLISHMENTS

SUBJECT: Report of Automatic Data Processing (ADP) Research and
Development Projects

The Advisory Council on Automatic Data Processing has proposed that
the Bureau of the Budget gather information, initially on a limited
scale, concerning research and development work undertaken or supported
by the Federal Government, which pertains to automatic data processing
(ADP) equipment or techniques for its use.

The Council bases its proposal upon fragmentary information which seems
to support the following assumptions:

1. In dollar terms the size of the ADP research and development
    effort in the Government is quite substantial, probably in
    the hundreds of millions annually.

2. Some of the current effort, probably a preponderant majority,
    is performed by contractors or recipients of Federal grants.

3. Many ADP research and development projects, deemed by the
    sponsoring agency to be unique to that agency's peculiar
    needs, often would be of substantial interest and utility
    to other agencies.

4. There is some evidence which indicates that two or more
    agencies may have similar ADP research and development
    contracts or projects without being aware of this.

5. Much of the ADP research and development work underway
    is not characterized as such, due to differing inter-
    pretations of the terms "ADP, "research", and
    "development."

In proposing that information be gathered centrally in the Government
on ADP research and development activities, the Council had certain
primary objectives in view. First, such information would be used to
make all (or selected) agencies aware of ADP research and development
projects underway or to be undertaken. Second, the results of projects
completed would be shared on a more widespread basis than at present.
Third, possibilities for multi-agency sponsorship of projects would be
enhanced. Fourth, unnecessary duplicative or overlapping effort would
be avoided.

Although we recognize that the field of automatic data processing is only one of many fields of research and development in which centralized information would be helpful, we agree with the Council as to the need in this specific field. Also, as discussed in Council meeting, we recognize the procedural problems in stating and interpreting information requirements. Discussions have been held with officials of the Defense Documentation Center (DDC), formerly Armed Forces Technical Information Agency, and the Science Information Exchange (SIE) of the Smithsonian Institution. We have concluded that decisions on possibilities for and the feasibility of gathering and disseminating information on ADP research and development should be based upon a limited experimental application.

This letter and the enclosed instructions are being sent to a majority of executive branch agencies. Each addressee agency is requested to prepare and submit a one-time report, even though negative, and to forward with the report suggestions for such improvements in the reporting requirements as would appear desirable in the event the decision is made to reissue the requirements at some future date.

The information received as a result of the one-time report required by the enclosure will be analyzed and evaluated in terms of its usefulness in meeting the objectives outlined above. The evaluated data will be discussed with the ADP Advisory Council. When these steps have been completed, decisions will be reached on whether the results of the experiment (1) would be of value to the agencies that submitted data, (2) justify experimenting with the collection of information concerning additional types of ADP research and development, (3) indicate the feasibility of making the reporting requirements continuous and more comprehensive, or (4) warrant discontinuance of further efforts on the proposal.

Reports prepared pursuant to the enclosed requirement, whether positive or negative, will be submitted to the Bureau of the Budget, Office of Management and Organization, on or before July 31, 1963. Questions pertaining to the enclosure should be directed to our ADP staff (Code 113, Extension 3311).

<div style="margin-left:50%;">

Sincerely,

Harold Seidman
Acting Assistant Director for
  Management and Organization

</div>

Enclosure

INSTRUCTIONS   June 1963

Report of Projects and Activities
Involving
Research and Development
in
Automatic Data Processing (ADP) Equipment
and Techniques for its Use

1. <u>Background.</u> Research and development projects and activities designed to bring about state-of-the-art advances in ADP equipment and techniques for its use are believed to be fairly widespread in the Government. Some are well known, but most are not. Numerous agencies have advocated the initiation of a procedure for gathering data centrally in the Government on ADP research and development as a means for (a) spreading knowledge of activities and projects underway or planned, this to lead to (b) more widespread use of results, (c) minimizing unnecessary overlap, and (d) possibilities for multi-agency sponsorship of projects.

While the objectives for centralization and dissemination of data of this type are valid, there are practical problems to overcome. Chief among these problems are the tasks involved in defining, categorizing and classifying types of ADP research and development projects and activities so clearly that the information submitted will be responsive to the requirement. Additionally, the investment of resources in a full-scale undertaking such as this conceivably might outweigh the advantages achieved.

In an effort to explore potential advantages, problems, and cost-versus-benefit considerations, a limited one-time report of ADP research and development projects and activities is requested.

2. <u>ADP research and development project; definitions and discussion.</u> A project (activity; undertaking) will be considered as an ADP research and development project if it involves consideration of ADP hardware, ADP software, techniques for use in the design of ADP hardware-oriented systems, or combinations of the same, as these three terms are defined below, and if the undertaking is also consistent with the definitions of "research", "development" and "project", which also appear below.

a. <u>ADP hardware:</u> Mechanical or electronic equipment which processes data automatically, including those types of equipment embraced by Bureau Circular No. A-54, plus one type of equipment excluded from A-54 coverage but necessary to include here, namely, ADP equipment manu-factured for the Government under a developmental contract. Also in-cluded is equipment for source data automation, optical scanning, character recognition, ADP equipment monitoring, data conversion and data display.

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b. ADP software: The techniques and concepts for progr.mming, coding and operating ADP hardware, including automated language;, compilers and similar aids.

c. ADP-hardware-oriented systems design techniques: Tec.niques for designing new and advanced automated systems, especially those techniques that involve the use of mathematical and management scieices, e.g., mathematical modeling, queing theory, statistical sampli.ig, systems integration, operations research, management by exceptioii, source data automation, etc.

d. Research: Study and investigation in a field of kno·iledge, undertaken to establish facts or principles. As further defined in Bureau Circular A-11, research may be

   (1) basic, i.e., directed toward the increase of kniwledge, or

   (2) applied, i.e., the practical application of kno·iledge.

e. Development: To bring into activity, as an idea; to bring into being as a machine; to work out in detail or expand as in mathematics or management sciences, techniques or theories.

f. Project: An undertaking, usually documented in the :'orm of a work order, job prospectus, assignment memorandum, contract, jurchase order or letter, which for the purpose of these instructions iivolves or is related to the use of ADP hardware, ADP software or ADP-hardware-oriented systems design techniques, and which in whole or in majoi· part involves research and/or development, as above defined, whether oi· not labeled as such.

The foregoing definitions will not cover every activity ιhich, for purposes of this requirement, should be reported. There may be piojects which are ADP-related only in part. Others may be outright purchaιes of ADP hard-ware, such as an optical scanning machine developed espeιially for the purchasing agency, which might not be construed as ADP hιrdware development. Items such as these, when considered doubtful or border-·ine, should be reported if the purposes of this experiment are to be seived.

In some situations, for example in a research institutioι, certain activities might not conform exactly with the definition of "project", provided above, because the activity is continuous (sometimes referred to as "open-ended"). Such activities, when they are reaιonably con-sistent with the other definitions provided, will be repcrted, pre-ferably with a notation of their status.

3. Limitation on categories of ADP research and developm ent projects to be reported. Because the reports submitted under theιe instructions are for experimental use, the categories within which prcjects are to be reported are limited to the following:

a. <u>Optical character recognition</u>. Projects that are to be reported under this category are those that involve research into and/or development of (1) equipment which scans and reads humanly legible data optically and electronically from documents for conversion into a form acceptable as input to other types of ADP equipment; (2) software essential to the effective utilization of optical scanning equipment; and/or (3) techniques for designing ADP-hardware-oriented systems so that the potential in optical scanning hardware and software can be advantageously used.

These requirements apply irrespective of the form of the document to to be scanned (e.g., paper, cards, microfilm, etc.) or the output ultimately resulting from the scanning process (e.g., tape, cards, hard-copy print-out, type bars for printing, etc.).

b. <u>Magnetic Character Recognition</u>. Projects to be reported under this category are those that involve research into and/or development of (1) equipment capable of sensing humanly legible characters imprinted in magnetic ink (including alphabetic or numeric characters or other symbols), and converting such characters or symbols into machine-oriented language for recording on magnetic tape, paper tape or other machine sensible medium, (2) software essential to the effective utilization of magnetic character recognition equipment, and/or (3) techniques for designing ADP hardware-oriented systems (procedures, processes, methods) so that the potential in magnetic character recognition hardware and software can be advantageously used.

These requirements apply irrespective of the medium on which the magnetic ink characters are imprinted (e.g., paper, cards, or other materials), or whether the hardware involved is self-contained or is integral to a larger complex of equipment.

c. <u>Reference systems for document retrieval</u>. Projects to be reported under this category are those (within the broader scope of information storage and retrieval systems) that concern themselves particularly with the automation of reference systems by which documents (e.g., reports, articles, journals, publication, statutes) containing the information sought can be identified and then located and retrieved for use. Included are research and development into (a) equipment designed for the express purpose of automating a system of reference and (b) indexing techniques used for identifying documents.

d. <u>Data Interchange</u>. Projects that are to be reported under this category are those that involve research into and/or development of (1) terminal communications equipment which is used to transfer coded characters or other symbols from one point to another point, whether or not the data is usable as received or requires further modification and refinement to convert it to usable form, (2) software, excluding computer programing languages, essential to the utilization of such equipment, and/or (3) techniques for designing ADP-hardware-oriented systems (procedures, processes, methods) so that the potential in data interchange hardware and software can be advantageously used.

e. Data Display. Projects that are to be reported under this category are those that involve research into and/or development of (1) equipment for use in automatic data processing which displays charts, graphs, compilations, etc., by a process of projection or otherwise which visually may be observed for analysis, (2) software essential to the utilization of such equipment, and/or (3) techniques for designing ADP-hardware-oriented systems (procedures, processes, methods) so that the potential in data display hardware and software can be advantageously used.

These requirements apply irrespective of whether the research and/or development is oriented to data display independent of, integral to, or capable of being used as a part of a larger complex of equipment.

4. Instructions for report preparation. A report form is provided as an enclosure to these instructions. Adherence to the enclosed format is requested. Further instructions concerning report entries follow.

a. General

(1) Limit to one project per form. When there are significant close relationships between the project reported and other projects, this fact should be stated in the project description.

(2) Projects underway during FY 1963, regardless of when started, and projects planned to start in Fiscal Years 1964 and 1965 will be reported.

(3) Projects completed during Fiscal Year 1962 or earlier, which the reporting agency believes would be of interest to other agencies, will be reported.

(4) Projects will be reported irrespective of security classification. All classified projects in each level of classification i.e., con-fidential, secret, etc.) will be reported separately by the level applicable.

(5) Projects which fall within these reporting requirements may have been reported previously to the Science Information Exchange (SIE) and/or the Defense Documentation Center (DDC). In these cases SIE and DDC have agreed to furnish computer runs of such projects to the reporting agencies, upon request, containing information which is responsive to these require-ments. The Bureau of the Budget will accept the SIE and DDC computer runs from the reporting agencies as attachments to their reports, thus making it unnecessary for the agencies to re-list the projects. However, the agencies are urged to review their ADP research and development activities to insure that all projects (including those not reported to SIE or DDC) are reported if consistent with these requirements.

(6) When a project is jointly sponsored by two or more federal agencies, these agencies will confer and reach agreement on the responsibility for preparing and submitting the report required.

b. <u>Reporting agency (item 1)</u>. Enter the name of the executive depart-
ment or establishment (hereafter termed "agency") submitting the report.
Include also, if appropriate, the name of the bureau, office or command
directly responsible for the project.

c. <u>Project number (item 3)</u>. For this series of one-time reports it is
requested that the agency use one numerical series for all reports,
beginning with #1. At the agency's option, its own project number if
any may also be entered either in parenthesis in Item 3 or as part of
the project description.

d. <u>Project category (item 4)</u>. Enter one of the five project categories
identified in Section 3 of these instructions. In the event one project
involves two or more of these five categories, enter as many as apply,
indicating the primary (principal) category where possible.

e. <u>Project orientation (item 5)</u>. Enter "X" in one, two or all three
blocks of this item, depending upon whether the project is oriented
entirely or partly to ADP hardware, ADP software or system design
techniques, as these are defined in Section 2 hereof.

f. <u>Method of implementation (%)</u>. Enter by use of percentages (no fractions)
the extent to which the reporting agency, other Federal agencies, and/or
outside-government contractors or institutions are involved in project
implementation. In the aggregate, the entries for this item should
equal 100.

g. <u>Items 7 and 8</u>. These items should reflect the points of contact
to be used by those persons in the Government who, after learning of
the project through the locator system, have a need to know and are
authorized to request additional project information.

h. <u>Project description (item 9)</u>. The descriptive matter entered,
which is to be used primarily as "locator" information, will be as
brief as possible but specific enough to provide to persons within
and outside the reporting agency a clear indication of the scope and
objective of the project.

i. <u>Project costs (item 10)</u>. Actual or estimated project costs reported
will be rounded to even thousands. Fractions or decimals will not be
used.

Project costs entered in this special report are for statistical use
and will not be viewed as "requests" in budgetary terms.

Actual or estimated project costs should be as fully representative
of total costs as possible. For example, research and development
work performed under contracts or purchase orders frequently require
expenditures above and beyond the dollar value attached to the
acquisition documents. These additional costs should be included
in the information reported in Item 10.

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j. Project schedule (item 11). Enter the scheduled dates on which the project began or will begin, and will be or was completed.

5. Supporting material. When in the judgment of the reporting agency the project report requires back-up material, such material will be stapled to each report copy submitted. However, as a general rule and in consideration of the purposes of the report, the attachment of additional material will be avoided if possible.

6. Submission of report. The report will be submitted in three copies. It is requested that all report copies be originals or reproductions of the original, i.e. not carbon copies.

Report forms identical to the enclosure will be reproduced by the reporting agencies, size 8" x 10 1/2".

All addressee agencies are requested either to submit the report(s) required by these instructions or to advise by letter that they have no projects to report.

Enclosure: Form ADP/RD-1

FORM ADP/RD-1
(One-Time)

REPORT OF ADP RESEARCH AND DEVELOPMENT PROJECT

1. REPORTING AGENCY:	2. DATE OF REPORT:

3. PROJECT NO.	4. PROJECT CATEGORY:

5. PROJECT ORIENTATION: ☐ Hardware ☐ Software ☐ System Design Techniques

6. METHOD OF IMPLEMENTATION (%): _____ Reporting Agency _____ Other Agency _____ Outside Government

7. NAME AND ADDRESS OF CONTRACTOR OR INSTITUTION (When Applicable):

8. INFORMATION CONTACTS:	IN GOVERNMENT	OUTSIDE GOVERNMENT
a. Name of Individual (s)		
b. Affiliation:		
c. Telephone:		

9. PROJECT DESCRIPTION:

10. PROJECT COSTS, ACTUAL OR ESTIMATED (Thousand): $ _____

11. PROJECT SCHEDULE: Beginning Date: _____ Completion Date: _____

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